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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,116

03/23/2006

Dieter Huhse

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01/31/2008

ROTHWELL, FIGG, ERNST & MANBECK, P.C.

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SUITE 800

WASHINGTON, DC 20005

EXAMINER

TURNER, SAMUEL A

ART UNIT

PAPER NUMBER

2877

NOTIFICATION DATE

DELIVERY MODE

01/31/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No. 10/573,116	Applicant(s) HUHSE ET AL.	
	Examiner SAMUEL A. TURNER	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/23/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Preliminary Amendment

The preliminary amendment filed 23 March 2006 has been entered.

Information Disclosure Statement

The information disclosure statement(s) submitted on 23 March 2006 has been considered by the Examiner.

Drawings

The drawings received on 23 March 2006 are accepted by the Examiner.

Specification

The disclosure is objected to because of the following informalities: on page 1, line 11 the specification refers to claim 1, and on page 6, line 12 the specification refers to claim 20. When a specification refers to the claims, any changes to or renumbering of the claims result in an amendment to the specification. These changes can effect the clarity of the disclosure and may introduce new matter. In the instant application, claim 20 has been amended which has resulted in removal of subject matter of any claim from which claim 20 depended. Because many of the claims from which claim 20 was dependent, additional changes in the specification have been introduced. All references to the claims must be deleted. The subject matter of the referenced original claims may be inserted to insure that the specification contains the disclosed subject matter. Appropriate correction is required.

The disclosure is objected to because of the following informalities: the specification lacks any section headings, see 37 CFR 1.77(b). Appropriate correction is required.

Claim Rejections - 35 USC § 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-20 are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claims 1-20 are indefinite because there are no clearly claimed steps. In claim 1, while pulses are generated, the component is driven, etc., the method steps to which protection is desired are not positively claimed. For example, there is no positively defined step of generating optical pulses. Claims 2-14, and 16-20 also fail to define any positive steps. The narrative format of the claims make it difficult determine antecedent basis for terms found in the dependent claims.

In claims 1, 7, 11, and 17; the phrase “in particular” is indefinite because a broad range or limitation followed by linking terms (e.g., preferably, maybe, for instance, especially) and a narrow range or limitation within the broad range or limitation is considered indefinite since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired.

In claim 1, the phrase “in the manner described” is indefinite because it fails to define the described manner. The phrase could be referring to a manner disclosed in the specification or to previous claim limitations. The phrase “an integral multiple of the pulse frequency (fp) plus the

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predefined frequency offset (Δf)” is confusing because it can be interpreted as $nfp + \Delta f$ or $n(fp + \Delta f)$.

In claims 2 and 3, the phrase “as optical carrier frequency” is confusing because there appears to be something missing from the claim.

Claim 8 appears to claim $(I_m * D_m) / I_m$ or simply D_m . The claim is confusing with regard to determining frequency behavior.

Claim 10 is confusing as to how a 2-photon detector can form the optical mixed products.

Claim 11, the claim is confusing as to how an optical rectifier can detect the optical mixed products.

The antecedent basis for at least the following terms cannot be located because of the narrative claim format: the summation frequency(claim 2), the difference frequency(claim 3), the spectral line strengths(claims 5, 6, 7), the selected mixed product(claim 8), the optical mixed products(claim 9), the predefined frequency band(claim 15), the phase response(claim 18), and the phase angle(claim 19).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 21 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Wyeth et al(4,940,331).

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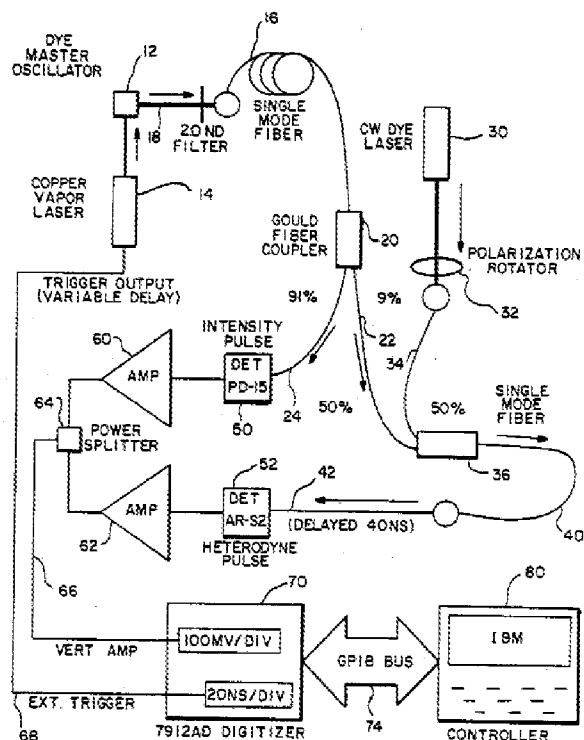


FIG. -1

With regard to claim 21, Wyeth et al teach an arrangement(**Fig. 1**) having a pulsed laser(**Fig. 1; 12, 14**), an electrooptical component(**Fig. 1, 30**) and a measuring device(**Fig. 1; 50, 52**) having an evaluation device(**Fig. 1, 80**). The computer 80 would have been suitable for carrying out any processing method.

Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Klein et al(5,293,213), see figure 9; van der Weide et al(5,748,309), see figure 1; Debeau et al(6,160,626), see figure 4; Krause et al(7,239,396), see figure 2, Kawanishi et al(JOLT- 1/1989), and Kawanishi et al(IEEE-4/1989), see figure 1.

Allowable Subject Matter

Claims 1-20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. § 112, 2nd paragraph, set forth in this Office action.

The following is an examiner's statement of reasons for allowance:

Claim 1 is narrative and fails to meet the requirements of 35 U.S.C. § 112, 2nd paragraph. Therefor any indication of allowable subject matter is based on the examiner's interpretation of claim 1. The allowable subject matter appears to be the combination of optical pulses having pulse and carrier frequency characteristics with the electrooptical component output signal having specific modulation and carrier frequency characteristics which produces the mixed products from which the frequency behavior of the electrooptical component is obtained, in combination with the remaining limitations of claim 1.

The examiner has interpreted claim 1 as a method for determining the frequency response of an electrooptical component within a predefined frequency band comprising the steps of:

- generating optical pulses at a first carrier frequency and a predefined pulse frequency;
- driving an electrooptical component with a predefined electrical measurement signal, said predefined electrical measurement signal having a measurement frequency at an integral multiple of said predefined pulse frequency and including an additional predefined frequency offset;
- generating an electrooptical component output signal, modulated at said measurement frequency, having a predefined second optical carrier frequency;
- frequency mixing said optical pulses and said electrooptical component output signal to form a plurality of mixed products;
- detecting at least one mixed product having a modulation frequency which corresponds to said predefined frequency offset;

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determining the frequency behavior of said electrooptical component at said measurement frequency based on the intensity of the detected mixed product; and repeating the step of determining the frequency behavior of said electrooptical component at all measurement frequencies corresponding to $n(f_p) + \Delta f$ which lie within said predefined frequency band, where $n(f_p)$ is an integral multiple of said pulse frequency and Δf is said predefined frequency offset.

Claims 2-20 are dependent from claim 1 and therefor also include the allowable subject matter.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel A. Turner whose phone number is 571-272-2432.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr., can be reached on 571-272-2800 ext. 77.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Samuel A. Turner/
Primary Examiner
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